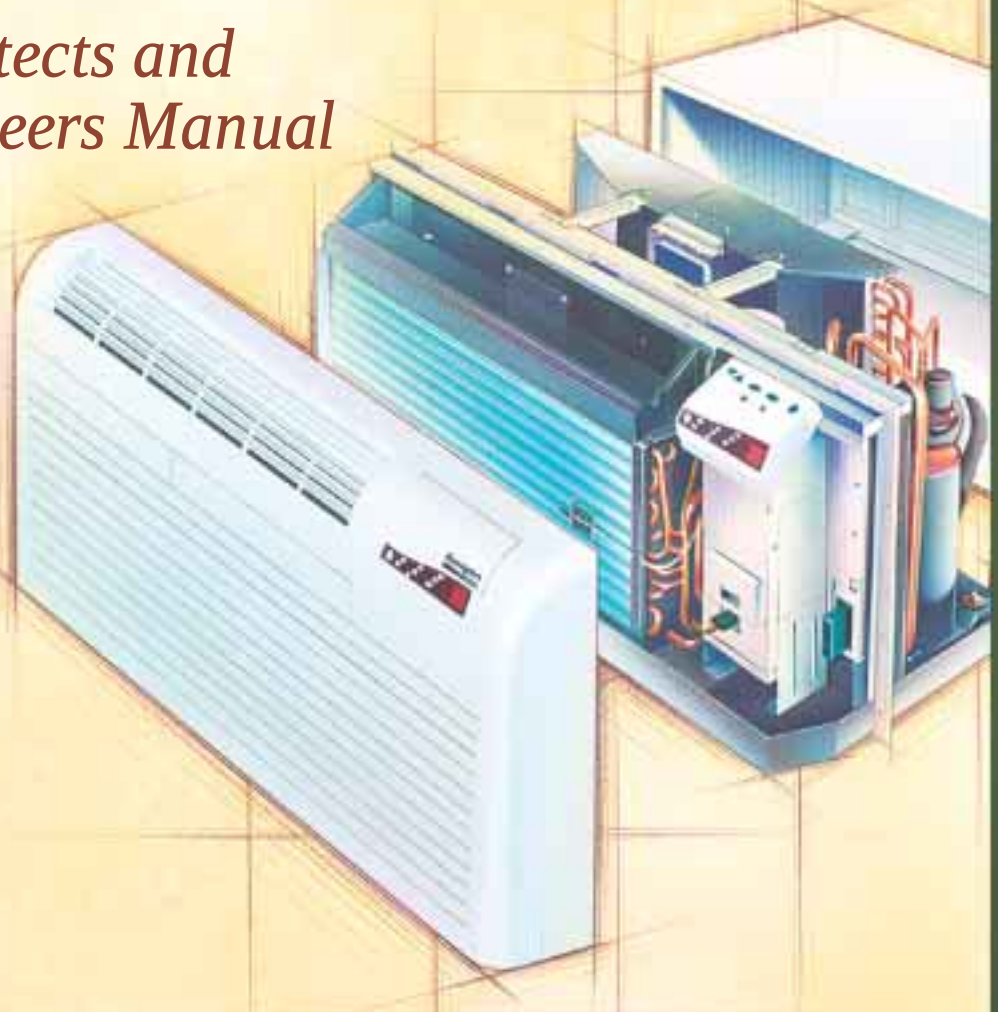
Remington®

Air Conditioning

Architects and Engineers Manual



Packaged Terminal Air Conditioners and Heat Pumps

STANDARD FEATURES COMPARISON

Remington, GE, Amana, Carrier and Friedrich

Features	REMINGTON PTAC Series	GE				Amana PTC/PTH	Carrier Model 52P	Friedrich P Series
		Deluxe 2500	Dry Air 25	Deluxe 3500	Premium 5500			
Infrared Wireless Capability	Standard	–	–	–	–	–	–	–
Sleep Timer Capability	Standard*	–	–	–	–	–	–	–
Automatic "Cool Dry" Humidity Control	Standard	–	–	–	–	–	–	–
"Rapid-Heat"/"Rapid-Cool" Technology	Standard	–	–	–	–	–	–	–
Extended Feature Touch Pad Controls w/LED	Standard	–	–	–	Standard	–	–	–
Digital Temperature Set Point	Standard	–	–	–	Standard	–	–	–
Universal Heaters/Power Connection	Standard	–	–	–	Standard	–	–	–
Solid State Thermostat	Standard	Standard	Standard	Standard	Standard	Standard	Option	–
Concealed Manual Vent Control	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Up-Front Cleanable Filter	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Automatic Indoor Frost Control	Standard	Standard	Standard	Standard	Standard	–	Option	–
Corrosion Treated Chassis	Standard	Option	Option	Option	–	Option	Option	Option
Two Position Bi-Directional Discharge Grill	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Fan Motors	2	2	2	2	2	1	1	1
Fan Cycle Switch	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Fan Only Setting – 2 speed	Standard	Standard	Standard	Standard	Standard	1 Speed	1 Speed	1 Speed
Indoor Fan Speed	Hi/Low	Hi/Low	Hi/Low	Hi/Low	Hi/Low/Auto	Hi/Low	Hi/Low	Hi/Low
Automatic Freeze Protection	Standard	Standard	Standard	Standard	Standard	Standard	Option	–
Temperature Limiting	Electronic	Electronic	Electronic	Electronic	Elect. 7-Step	Electronic	Mechanical	Mechanical
Remote Control Thermostat Compatibility	Standard	Standard	Standard	Standard	Standard	Standard	Option	Option
"Front Desk" Control Interface	Standard	Standard	Standard	Standard	Standard	Standard	Option	Option**
Service Indicator LED	Standard	–	–	–	Standard	Standard	–	–
Self Diagnostics	Standard	–	–	–	Standard	Standard	–	–
Automatic Emergency Heat	Standard	–	–	Standard	Standard	Standard	Standard	Standard
Quick Heat Recovery	Standard	–	–	Standard	Standard	–	–	–
Auto (Random) Restart/Power Recovery	Standard	Standard	Standard	Standard	Standard	Standard	–	–
NIM PC Interface Module	Standard	–	–	–	–	–	–	–

This comparison is based on publicly available information believed to be accurate and current at the time of publication. * Requires purchase of specific Touch Pad to enable ** Requires purchase of additional Field Mounted Kit

NOMENCLATURE PTAC 07 B 208 R

MODEL
PTAC=Packaged Terminal Air Conditioner (Cooling with Electric Heat)
PTHP = Packaged Terminal Heat Pump

COOLING CAPACITY (BTUH)
07 = 7,000 12 = 12,000
09 = 9,000 15 = 15,000

VINTAGE DESIGNATION

REMINGTON

VOLTAGE
208/230 - 1 Phase
265 - 1 Phase

Remington Air Conditioning

#110511303

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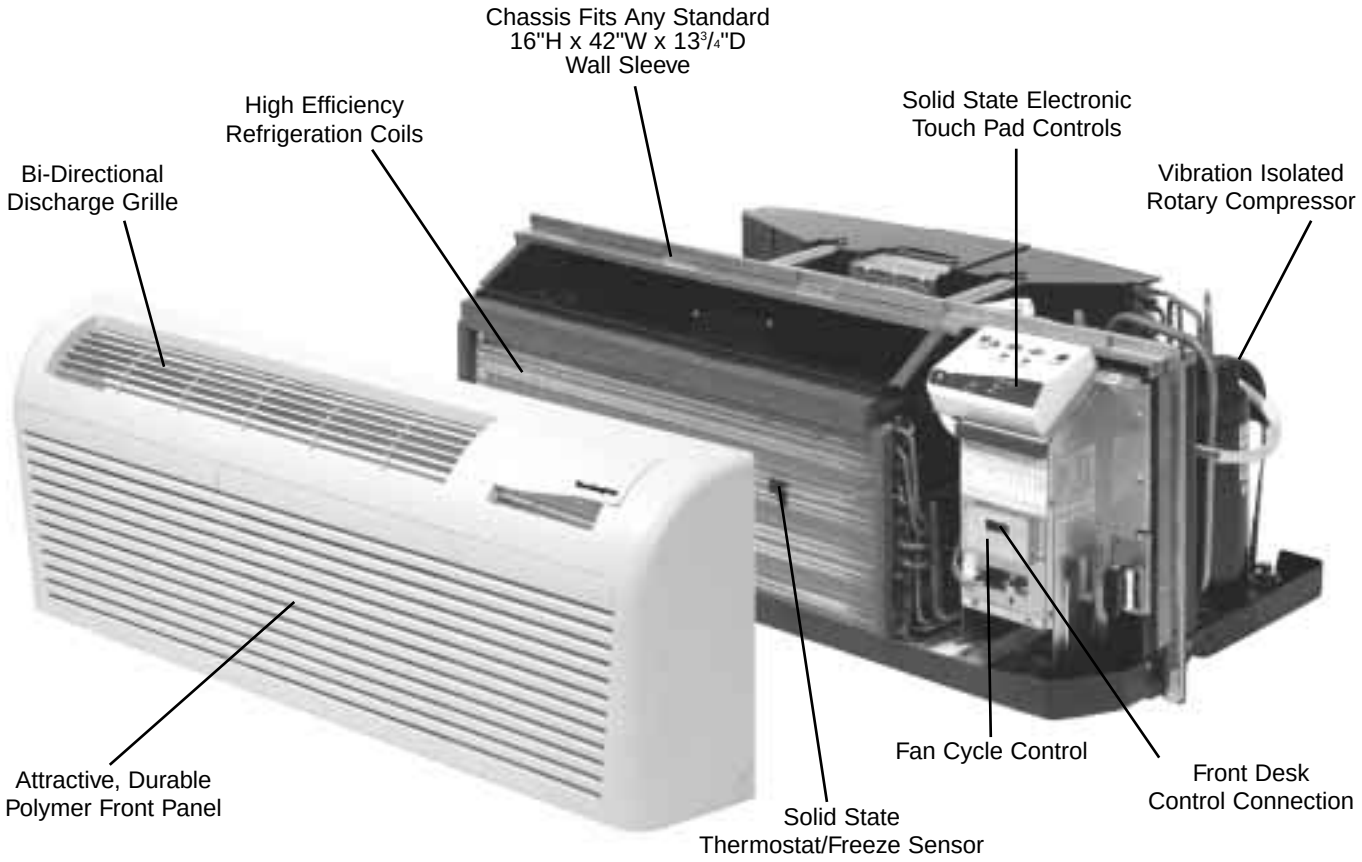
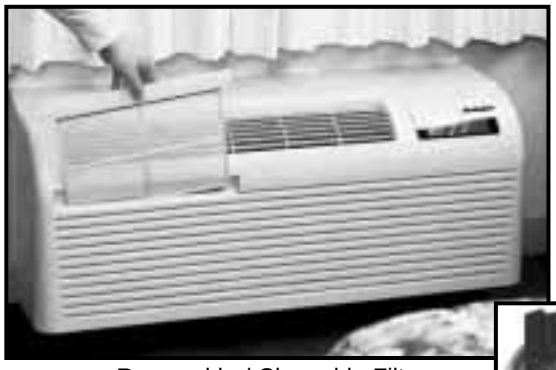
Remington
Air Conditioning

Packaged Terminal Air Conditioners and Heat Pumps





Removable / Cleanable Filters

Universal Heater/
Power Cord

Electronic Control Pads / Optional Remotes

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Introduction...Packaged Terminal Air Conditioning

At Remington®, innovation is more than a mission, it's our history. It began in 1955, when we developed the first through-the-wall, self-contained heating and cooling system for individually-zoned applications. It was an invention that revolutionized the heating and cooling industry.

When it was first introduced, the Incremental® System, or Packaged Terminal Air Conditioning (PTAC) as it's known today, was a new concept, built on the premise that by using a small air conditioning unit in each space, multi-zone buildings could be heated and cooled more efficiently and at lower first costs versus using an expensive central plant. This major breakthrough made a lasting impact.

Since that first Incremental System was introduced, hundreds of thousands of Packaged Terminal Air Conditioners and Heat Pumps(PTHP) have been installed in all types of buildings, all over North America. Residents, employees, students, visitors and more now enjoy year-round comfort in a host of multi-room, multi-story buildings such as hotels/motels, office buildings, apartments, dormitories, hospitals, nursing homes and schools.

Advantages of a "PTAC"

Lower First Cost
There is no need to pay for expensive ductwork, a central chiller/boiler plant or the miles of piping that are required with central systems. This can significantly reduce both design and installation costs. Capital costs can also be reduced by providing a unit to the space only when it becomes occupied.

Lower Design Costs
The overall system design is greatly simplified, allowing designers to devote more time to other areas and reducing overall costs.

Architectural Design Freedom
Eliminates the need for large mechanical equipment rooms, which helps increase potential leasable space. Expensive ductwork is also eliminated, so the floor to floor distances can be reduced without lowering ceiling heights.

Comfort on Demand
Each occupant determines their own comfort requirements for their space. By using Remington units, occupants can easily cool one room while simultaneously heating another without continuously operating a central chiller and central boiler.

Inherent Economy
Installing PTAC/PTHP units reduces the need to condition the entire building to provide comfort in one space. For example, with this type of system, comfort conditioning can be provided in one area for an occupant working after hours, while the rest of the building sleeps.

Easy Maintenance Without Disruption
Packaged Terminal products require minimal maintenance because of their simple design and high-quality construction. Routine maintenance can be easily performed by a facility's own staff. If a unit becomes inoperable, it can be repaired or replaced without disruption of adjacent spaces. The easy, slide-in, slide-out chassis allows one person to quickly remove and replace an inoperable unit, minimizing downtime in the effected space.

The new Remington PTAC/PTHP unit has revolutionized the industry with its superior options and innovations, bringing you the highest quality air conditioners in the industry, year after year.

The New Remington® 16 x 42 PTAC/PTHP Series Unit…Our Advantages

Energy Savings Beyond Energy Efficiency Rating (E.E.R.)
The Digital Temperature Set Point allows each occupant to easily set their precise desired zone comfort temperature. Eliminating the zone comfort guesswork inherent with mechanical knob controls decreases unnecessary running of the unit and helps prevent expensive over-cooling/overheating.

Standard Flexible Control Module
The Remington unit has a flexible control module. This allows the digital control pad to be removed and mounted within the room on a wall within the occupied space. Additionally, the standard features and functionality of the controls are a superior value versus the mechanical knobs most other PTAC's use.

Corrosion Resistant Hydrophilic Coils
On Remington units, all evaporator and condenser coils are protected with a hydrophilic coating. This feature is standard on all Remington units, making it an ideal choice for any environment, including highly corrosive environments such as Florida. This protection can also extend the life of your coils, offering added cost savings.

Classroom Benefits
Remington units' standard features provide exceptional benefits for classroom applications. There are no knobs for students to remove and lose. Remington's two-motor units are inherently quieter than a single motor design. The Remington unit is pencil proof. The Fresh Air Damper also arrives without additional labor required to enable the damper.

Extra Humidity Control
Remington is the only AC manufacturer to offer the Cool-Dry Dehumidification Mode standard on all units. The system is designed to provide high indoor air quality (IAQ) by reducing humidity which can help to prevent mold/mildew build-up in conditioned space. As a result, the conditioned air will feel and smell fresher, removing up to 70% more humidity in the Cool-Dry mode when compared to the standard cool mode at 50% load. Results will vary under different loading conditions.

A Superior Choice
Remington units meet the industry standard (ASHRAE 90.1) for E.E.R.'s and capacities, and they offer much more than that. Our money-saving operational features, combined with our superior warranty packages, can pay dividends both in labor savings and operational costs in the long run.

Warranty
No other manufacturer stands behind their product like Remington. Both our Gold Plus and Platinum Plus Packages offer a limited one-year unit exchange warranty on the entire conditioner and a refrigeration circuit unit exchange warranty for the 2nd through 5th year. The Gold Plus package offers an additional functional parts warranty for the 2nd through 5th year. Freight costs will be paid by the manufacturer. Please contact us for more warranty package details.

Remington's contemporary design is both attractive and thoughtful - with standard features like solid-state electronic touch pad controls that are easy to operate and provide precise comfort settings.

Remington® Air Conditioning...Our Advantages

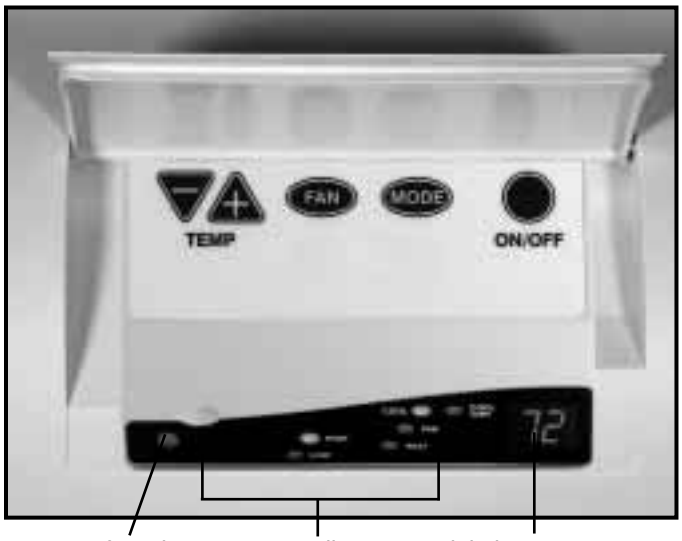
Remington PTAC/PTHP are quiet, energy efficient products that provide greater flexibility to meet zoned heating and cooling requirements. They are the perfect choice for new or replacement projects.

For new projects: The Remington PTAC/PTHP products give you the flexibility to design your overall system the way you want it. Units are available with cooling and electric resistance heat or heat pump operation. Multiple sizes and voltage ratings allow you to match the heating, cooling and electrical requirements of each application and each zone. Remington's all-in-one unit or wall-mounted touch pad control and remote control interface gives you the flexibility to choose the control scheme that best fits your requirements. All control schemes can be selected on-site.

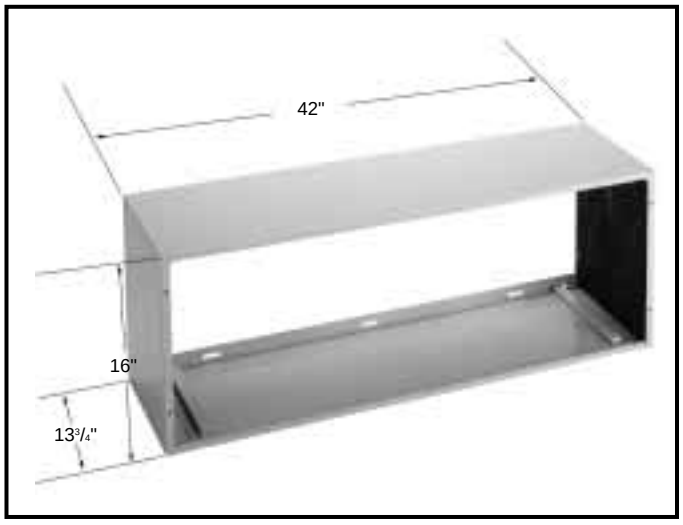
For replacement projects: Remington conditioners are easy to install and maintain and will fit any standard 16"H x 42"W x 13¾"D wall opening.

- Remington conditioners are compatible with most existing wall thermostats and remote control interfaces for added savings on installation labor and costs.
- Insulated wall sleeve is constructed of heavy-gauge, zinc-coated, phosphatized steel, with welded joints and polyurethane based powder coating for maximum durability and corrosion resistance.
- Standard 16"H x 42"W x 13¾"D dimensions.
- Factory welded slide channels facilitate easy installation and removal of chassis.
- Predrilled to align with chassis mounting screws and simplify installation.
- Separate shipment of wall sleeve is available to avoid damage to the chassis during construction. A waxed weather panel is provided to keep out the elements until the chassis arrives.
- Sleeve extensions are available for competitors' shallow wall sleeve applications (11½"D) that do not conform to industry standard depth (13¾"D).

Touch Pad Controls



Wall Sleeve (Indoor View)



Remington PTAC/PTHP

Features and Benefits

Remington® PTAC/PTHP	What it does for you
Solid state electronic touch pad controls	Reliable and easy to use.
Digital temperature set point and LED indicator lights	Provides room occupants with exact comfort setting and continuous unit operating status.
"Cool-Dry" humidity control	Automatically controls humidity (when selected) for improved comfort and better indoor air quality. This feature can add 70% more dehumidification than the normal A/C operation.
Rapid-Heat™ and Rapid-Cool™ technology	Allows the unit to quickly bring room to comfort conditions at start-up while reducing cycling. Saves wear and tear on compressor.
Sleep Option	Raises or lowers room temperature by several degrees for guest comfort and energy savings.
Timer Option	Automatically controls unit shut-off after a specified time (1 to 15 hours).
Temperature Electronic Limiting	Adjustable minimum and maximum room temperature set points.
Infrared capable	Allows wireless remote control of all units (wireless remote controller optional).
Universal electric heater	Provides flexibility to select among three heater sizes and amperage ratings (power cord ordered separately).
Dual fan motors	Provides quiet operation and lower operating costs.
Compressor time-delay restart	Reduces wear and tear for extended life.
Automatic random restart	Helps avoid overloading electrical circuits in the event of a power outage.
Solid-state thermostat/freeze sensor	Provides precise temperature control and automatically senses and responds to low temperatures to protect against freeze conditions.
Standard interface for front desk control	Allows easy connection to energy management or front desk control.
All-in-one unit or wall-mounted touch pad	Provides flexibility to choose unit or remote control without purchasing a separate thermostat (optional wiring kit is required).
Cooling with electric resistance heat or heat pump operation in multiple sizes, capacities, and voltages.	Provides flexibility to match application requirements and the requirements of each zone.
Industry standard 16"H x 42"W x 13¾"D wall sleeve dimension	Simplifies design for new construction and is compatible with most existing wall sleeves for easy, low cost replacements.
Multiple fan speed settings	Provides quiet, economical operation.
Fan cycle control	Allows continuous or fan cycle operation.
High efficiency refrigeration coils with hydrophilic coating	Provides maximum efficiency and corrosion resistance.
Up-front, cleanable filters	Easily accessible filters can be cleaned without removing the front panel.
Vibration isolated rotary compressor	More efficient, quieter, and more reliable than reciprocating compressors.
Manual control outside air damper	Can be opened for fresh air operation or closed tight to recirculate room air and conserve energy.
Bi-directional indoor air discharge grille	Allows airflow to be directed where it is needed most.
Attractive, durable polymer front cover	Complements any room décor and maintains its "like new" appearance under demanding conditions.
Wall Stat/controller option	Compatible with most 24V wall thermostats.
LED Diagnostics	Unit self-diagnostics.

Engineering Guide Specifications - Remington® Model

General
Furnish packaged terminal (air conditioners) (heat pumps) of the sizes and capacities shown on the schedule and/or specifications. The units shall be located as shown in the drawings and each shall include wall sleeve, outdoor louver, heating/cooling chassis, front panel and subbase (optional 208/230v).

All units shall be ETL and CETL listed for safety and ARI certified for capacity and performance. Units shall be Remington® Model designated with prefix (PTAC) (PTHP) or equal.

Overall dimensions for the basic unit (excluding louver) shall not exceed 42" wide, 16" high and 20 3/4" deep. Standard wall sleeve dimensions shall not exceed 16" high, 42" wide and 13 3/4" deep. Units furnished with an electrical subbase shall not exceed 42" wide, 20" high and 20 3/4" deep.

Units shall be designed to operate on (208/230) (265/277) volts, 60 Hz, single-phase power.

The E.E.R. shall be from 11.6 to 9.2 and COP from 3.4 to 2.8.

Heating/Cooling Chassis
Chassis shall be slide-in, plug-in type with a self-contained, hermetically sealed refrigerant circuit. All chassis sheet metal parts shall be coated with a polyester based powder paint or galvanized for maximum corrosion resistance.

The chassis shall consist of the following components: vibration isolated, permanent split capacitor rotary-type compressor, rifled copper tubed evaporator and condenser coils with high efficiency raised lance aluminum plate fins that are hydrophilic coated to resist corrosion and mechanically expanded to the tubes for maximum heat transfer and a capillary restrictor type refrigerant metering device. Coils shall be factory tested at 300 psig (heat pump models shall also include reversing valve and charge balancing device).

A positive-closing, manual fresh air damper shall be included within the chassis to provide the option of fresh air during operation.

System airflow shall be accomplished by the use of the separate outdoor and indoor fan motors. Motors shall be permanent split capacitor, totally enclosed and permanently lubricated. A single speed motor shall directly drive the outdoor fan. The outdoor fan shall be constructed out of high impact resistant polymer and consist of multiple propeller-type blades with a slinger ring designed to efficiently remove condensate. The indoor fan assembly shall consist of a single centrifugal fan that is forward curved and directly connected to a two-speed motor. All fans shall be statically and dynamically balanced to provide for quiet and smooth operation.

During the cooling cycle, the compressor and both fan motors shall be energized. Condensation accumulated on the indoor coil shall be drained into the outdoor section of the unit where it is to be picked up by the outdoor fan and transferred to the outdoor coil where it shall then be evaporated to enhance units' capacity and efficiency.

(Electric Resistance Heat Only Models) During the heating cycle, only the indoor fan motor and the electric resistance heaters are energized. The compressor shall not be energized. Heaters shall be high mass cal-rod type with high limit cutout. Electric resistance heaters shall be universal in design such that the type of power cord specified with the heating/chassis determines the respective heater size as shown in the schedule and/or specifications. Electric resistance heaters must be located behind the indoor coil and must not be visible or accessible through the indoor discharge grille.

(Reverse Cycle Heat Pump Models) During the heating cycle, the reversing valve, compressor and both fan motors will be energized. Depending on the outdoor air temperature, two distinct heating modes shall be available. Namely, compressor only or electric heat only. Minimum outdoor temperature for compressor operation shall be 25°F. Between outdoor temperature of 25°F and 45°F, the compressor and electric heater will alternate as required to maintain indoor temperature. When the outside temperature is below 25°F, the electric heat-only mode shall be utilized. The electric heaters shall be high mass cal-rod type with high limit cutout. Electric resistance heaters shall be universal in design such that the type of power cord specified with the heating/chassis determines the respective heater size as shown on the schedule and/or specifications. Electric resistance heaters must be placed behind the indoor evaporator coil and must not be visible or accessible through the indoor discharge grille. Condensation accumulated on the outdoor coil during reverse cycle heating MUST not be evaporated against the indoor coil as it could contaminate the indoor air with pollutants and odors. Condensation accumulated during reverse cycle heating shall transfer from chassis into wall sleeve by means of a thermostatically controlled drain valve. Condensate shall exit wall sleeve via weep holes or optional indoor/outdoor drain kit.

Controls

The controls shall utilize solid-state electronics. Operation of the unit shall be controlled through the use of a touch-pad. The touch-pad shall use no knobs and shall be liquid tight for easy care and cleaning. The control shall incorporate digital display of temperature settings, allowing precise comfort selection by user.

The touch-pad shall include an ON/OFF selector, a MODE selector that will enable the user to select HEAT, COOL, Cool/Dry or FAN only operation; a FAN selector that allows high or low speed fan operation; and a TEMP selector to allow for precise room temperature adjustment.

Operation/mode of the unit shall be easily confirmed through the use of LED status lights and a soft confirming beep sound. The LED status lights must be visible with the control door closed.

The touch-pad shall be designed to be easily removed from the heating/cooling chassis and mounted to a wall for remote control without the need or cost of separately purchased wall-mounted controls. The unit shall retain all of its features regardless if the touch-pad is mounted on the wall or unit.

The touch-pad shall be infrared capable for control via wireless remote controller.

The controls shall incorporate a standard interface for low voltage connection to dry contacts at a central control or energy management system.

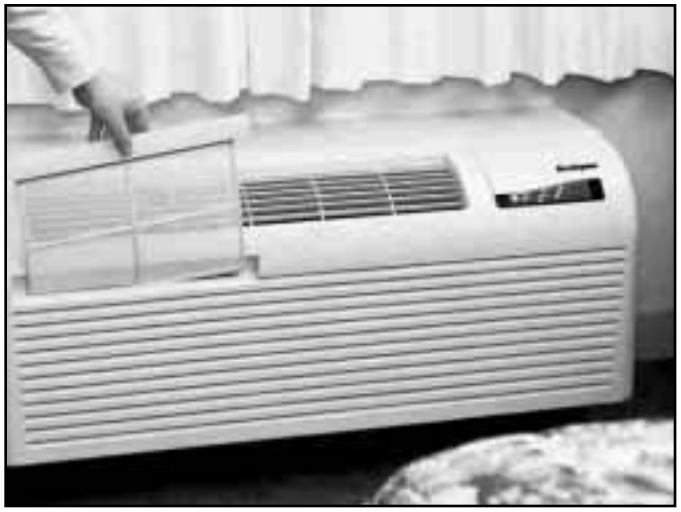
The electronic controls shall allow the Owner/Facility Manager to establish the maximum and minimum temperature range for heating and cooling modes (electronic temperature limiting).

Unit shall have automatic temperature compensating algorithm (+2°F in HEAT or –2°F in COOL) to minimize temperature swing and compressor cycling during period when room is brought to set point temperature after being off for 2 or more hours. This will automatically compensate for the cold or warm radiation effect felt from the mass in the walls, floor, and furnishings until they normalize. The 2°F offset is maintained for the first cycle only. After that, the setting reverts to that shown on the digital display.

The unit shall have two cooling modes (COOL and COOL/DRY). The Cool/Dry feature shall be Owner/Facility Manager activated or deactivated by an internal dipswitch and when activated, be user selectable through the touch-pad control. When the Cool-Dry mode is selected, the control algorithm shall slightly extend the run time of the compressor and low fan without significantly changing the room temperature from the user set point. This feature shall increase dehumidification by up to 70% when compared to the standard Cool mode.

The touch-pad shall be interchangeable and upgradeable with an optional touch-pad that includes Sleep and Timer functions and shall also be compatible with an optional wireless infrared remote with these functions. When the optional touch-pad is present, pressing the Sleep button shall activate the Sleep feature. The Sleep mode shall improve comfort and reduce energy consumption by gradually raising the room temperature by 3.6°F from the set-point over two hours in cooling mode, or lowering the room temperature by 5.4°F over 2 hours in the heating mode. Pressing the Timer button shall activate the Timer feature. Each press of the button shall increase and display the timer setting in hours from 1 to 15. When the timer is activated when the unit is operating, the unit shall shut off at the selected time interval. When the unit is off and the timer is activated the unit will come on at the selected time interval in the control settings (Mode/Fan/Temperature) that were last set on the unit.

In the event of a malfunction the control shall provide self-diagnostics and display an error code to allow easy identification of service required.



Controls (cont.)
Each unit shall incorporate an automatic indoor coil frost control to extend compressor life by limiting operation in low ambient conditions.

In case of power failure, each unit will randomly restart when power resumes to avoid overloading and power surging of the electrical circuits. Also, upon restart, the unit shall retain its last control setting.

An Owner/Facility manager selectable fan cycle switch shall be incorporated to allow either continuous or cycle operation of indoor fan.

Room freeze protection shall be incorporated to safeguard against freezing indoor temperatures and shall be Owner/Facility Manager activated/deactivated. When activated, if the indoor temperature drops to 40° F, regardless of the control setting the electric heater and indoor fan will automatically energize to prevent further room temperature decline.

Outside Air Louvers
Outside air louvers shall be (stamped) (extruded architectural) anodized aluminum finished natural (stamped louvers shall be heavy gauge anodized aluminum of no less than 16 gauge). Extruded architectural louvers are also available with baked enamel to match color chip by others. Louvers by others must be approved by the heating/cooling chassis manufacturer as to adequate free area and air circulation requirements.

Electrical Subbase
As specified and shown on plans, a 3" or 4" high electrical subbase shall be furnished. Electrical subbase shall be ETL and CETL listed and constructed of heavy gauge steel and finished with epoxy based powder paint to resist corrosion. Optional fused disconnects are also available. To ease field installation, subbase must have adjustable side channels with predrilled adjusting holes and score lines. Additionally, subbase shall have adjustable leveling legs each with 1" adjustment.

Front Panel
Each heating/cooling chassis shall come complete with a decorative front panel. Front panel shall be designed with a contoured top to facilitate airflow into the room. Additionally, it shall be designed to wrap-around the heating/cooling chassis and constructed of impact resistant polymer. The color of the front panel shall be Antique Ivory as to match that of the wall sleeve. The airflow discharge grille shall be an integral part of the front panel and shall be made of the same impact resistant polymer material as the front panel. The discharge grille shall consist of a single section and be designed to be two-position reversible to customize the direction of airflow out of the unit. Room side return air shall enter the heating/ cooling chassis through the louvered front panel.

Filtration
Room side return air shall be completely filtered through permanent, washable polypropylene mesh filters. Foam type filters are not acceptable. Filters shall be designed for easy access without removing the front panel.

Wall Sleeve
The wall sleeve shall be entirely constructed of A-60 galvaneal, phosphatized, 18-gauge steel. It shall be finished with polyurethane based powder paint to provide maximum corrosion protection. Additionally, the interior top and side surfaces shall be insulated. Wall sleeves with ordinary enamel finish or those made from polymeric material are not acceptable. Wall sleeves shall have factory provisions for use of appropriate fastening devices to secure sleeve to the wall through the sides.

Application Considerations

The following is a brief description of application considerations for the Remington Terminal Air Conditioners and Heat Pumps. More detailed instructions are included in IM719 Installation and Maintenance Data - Remington Packaged Terminal Air Conditioners and Heat Pumps and are available from your local Remington representative or by visiting www.HVACnow.com

Unit Selection

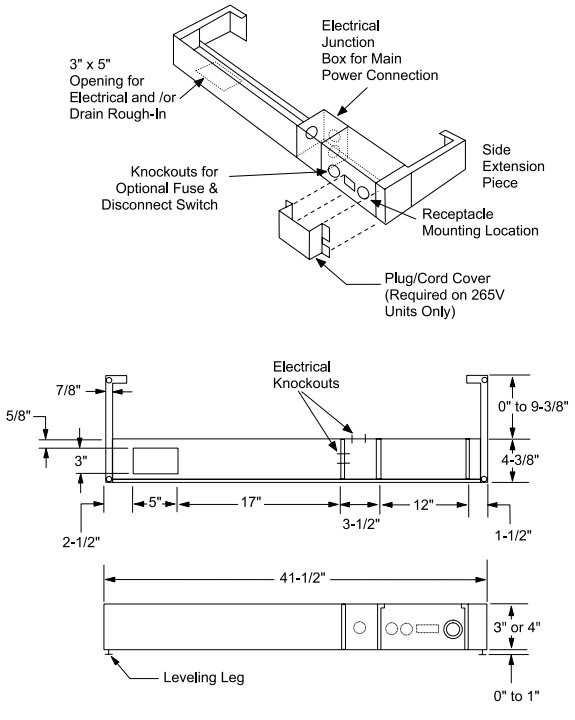
Remington Packaged Terminal products are designed and built for through-the-wall installation in either new or existing buildings. Their self-contained refrigerant system delivers cooling to the desired space. Heating is accomplished with electric resistance heat or reverse cycle technology (heat pump models only). Final selection should be made with an architect, engineer or by contacting your local Remington Sales Representative.

Wall Opening Requirements

The rough opening should measure 16 1/4"H x 42 1/4"W. When using a louver frame, the opening should measure 16 5/8"H x 42 5/8"W (see figure 8 on page 14). The wall opening should be clear of obstructions to allow the wall sleeve to slide into it.

When a subbase is used, the opening must start 3" or 4" above the finished floor (including carpeting) to match the height of the subbase selected. The subbase is available in 3" or 4" heights and has adjustable leveling legs that provide up to an additional 1" height. A 3" or 4" subbase is required for 265V models and is optional for 208V/230V models. Figure 1 shows the subbase and dimensions.

Figure 1. Electrical Subbase

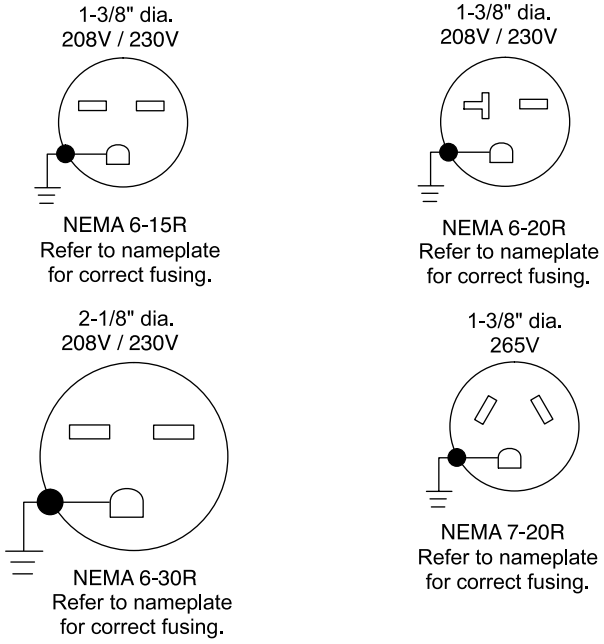


Front Elevation (Three Front Panels in Place)

Power Supply Wiring

All wiring must be done in accordance with all local and National Electrical Code requirements. Time delay fuses or HACR circuit breakers are required. The chassis has a universal electric heater, so the kW is determined by the field-installed power cord. Figure 2 shows the electrical receptacles for each power cord.

Figure 2. Electrical Receptacles



Control Wiring

The control pad is factory wired on the unit and ready for operation. If the control pad will be remote mounted, it can be removed from the unit, detached from the control box and wired using an optional 20', 35' or 50' low voltage wire harness accessory and a remote mounting plate. A snap-in decorative cover replaces the control pad on the unit. The mounting location (with regard to cold drafts, discharge air, outside wall, etc.) is not critical as the room temperature sensor remains on the unit.

Remote Wall Thermostat

Units are compatible with most wall thermostats and a remote thermostat can be installed by removing the control pad and wiring the remote thermostat to the control box. A snap-in decorative cover replaces the control pad on the unit. Mount the thermostat on an inside wall, away from the unit discharge air stream. It is important to note that if a remote wall thermostat is used, the standard control features of the unit control pad (with the exception of "Remote on/off") will not be available unless the wall thermostat used includes them.

Controls

The system logic required to operate the Remington Packaged Terminal Air Conditioners is factory wired and ready to go when they arrive at your job site. Or, if you prefer, units can be easily modified to accommodate the control scheme that best meets your requirements. The all-in-one digital control pad can be easily removed from the unit for remote wall mounting. A standard interface on the unit permits easy connection to energy management or central building control systems. Finally, a 24V remote thermostat can be used in lieu of the control pad.

Control features available to the room occupant using the control pad include:

Heat - is selected by pressing the ON/OFF key to ON and the MODE key to HEAT and using the ⏃ or ⏚ arrow keys to set the standard room temperature.

Cool - is selected by pressing the ON/OFF key to ON and the MODE key to COOL and using the ⏃ or ⏚ arrow keys to set the standard room temperature.

Fan - is selected by pressing the ON/OFF key to ON and the MODE key to FAN. In this mode, only the fan will operate.

Two Speed Fan - High/Low fan speed is selected by pressing the FAN key to HIGH or LOW while the unit is operating in HEAT, COOL or FAN mode.

Timer (optional) - to turn the unit off, press the TIMER key repeatedly to select the number of hours (1-15) after which the unit will turn off. To turn the unit on, preset the unit to the desired mode and temperature and turn it off. Press the TIMER key repeatedly to select the number,of hours (1-15) after which the unit will turn on.

Wall Mounted Touch Control Pad
(shown with optional sleep/timer)

Unit Mounted Touch Pad

Sleep (optional) - press the SLEEP key to activate this function. In the HEAT mode, over a two-hour period, the unit temperature setting will gradually drop 5°F. In the cooling mode, over a two-hour period, the unit temperature setting will gradually raise 4°F.

Cool/Dry - In this mode, the compressor indoor low fan will cycle together and will operate for longer periods of time to provide the increased rate of dehumidification up to 70%.

Continuous/Cycle Fan - the indoor fan can operate continuously or cycle on and off with the compressor or heater.

Room Freeze Protection - the electric heater and indoor fan will be turned on as needed to maintain a 40°F to 50°F minimum temperature to prevent freezing, so long as power is supplied to the unit.

Remote ON/OFF - the unit may be turned off and on from a front desk, or with a time clock, etc., located up to 325 feet from the unit.

Electronic Temperature Limiting - the factory supplied control temperature range is from 60°F to 85°F. Other minimum temperature settings include 64°F, 68°F and 72°F. Other maximum temperature settings include 75°F, 78°F and 82°F.

Options

Wall Sleeve

- Insulated wall sleeve is constructed of heavy-gauge, zinc-coated, phosphatized steel, with welded joints and polyurethane based powder coating for maximum durability and corrosion resistance.
- Standard 16"H x 42"W x 13 3/4"D dimensions.
- Factory welded slide channels facilitate easy installation and removal of chassis.
- Predrilled to align with chassis mounting screws and simplify installation.
- Separate shipment of wall sleeve is available to avoid damage to the chassis during construction. A waxed weather panel is provided to keep out the elements until the chassis arrives.
- Sleeve extensions are available for competitors shallow wall sleeve applications (11 1/2"D) that do not conform to industry standard depth (13 3/4"D).

Drain Kits

- Internal or external mounted drain kits.
- Pre-drilled wall sleeve simplifies drain kit installation.

Subbase

- Adjustable leveling legs comes in 3" or 4" height with an additional 1-inch adjustment (see figure 3).

Figure 3. Electric Subbase

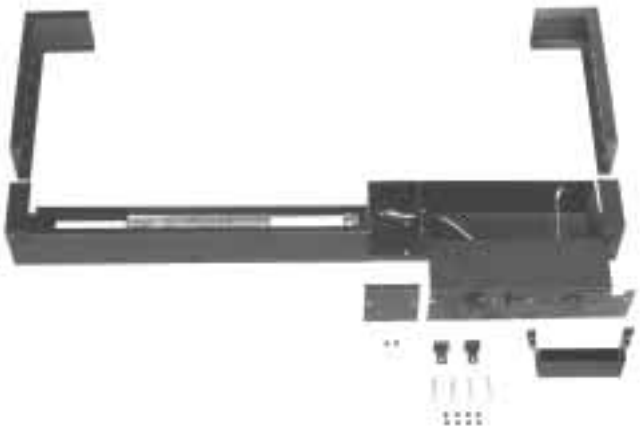
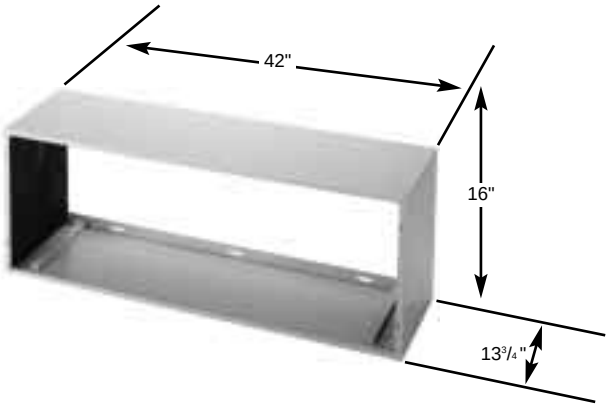


Figure 4. Standard Stamped Aluminum Louver



Outdoor Louvers

- Standard stamped aluminum louver (see figure 4)
- Extruded aluminum architectural louver (see figure 5)
- See inside back cover for color options on louvers

Wireless Infrared Remote Control (Optional)

- Requires only wireless remote controller. Unit comes standard with infrared sensor.

Remotes (optional)

Louver Frames

- Mechanically attach wall sleeve to the wall for panel wall construction jobs. Also trims exterior rough cut wall openings for better appearance.

Figure 5. Extruded Aluminum Architectural Louver

Performance & Electrical Data

General Product Data

UNIT SIZE				07		09		12		15	
Voltage				208/230	265	208/230	265	208/230	265	208/230	265
Cooling w/Electric Heat	Cooling (1)	Capacity (Btuh)		7,400/7,500	7,400	8,900/8,900	8,900	11,200/11,600	11,600	14,000/14,500	14,400
		EER		11.5/11.3	11.3	10.6/10.4	10.4	10.1/10.0	10.2	9.4/9.4	9.4
		Full Load Amps		3.1/3.0	2.5	4.1/3.9	3.3	5.4/5.1	4.4	7.3/6.9	6.0
		Watts		643/664	652	839/855	856	1,109/1,160	1,139	1,489/1,543	1,524
	Electric Heat (3)	Small	Watts	1,500/1,900	1,900	1,500/1,900	1,900	1,500/1,500	1,900	1,500/1,500	1,900
			Btuh	5,115/6,479	6,479	5,115/6,479	6,479	5,115/5,115	6,479	5,115/5,115	6,479
			Amps	7.5/8.5	7.4	7.5/8.5	7.4	7.5/7.5	7.4	7.5/8.5	7.4
		Medium	Watts	2,300/2,800	2,800	2,300/2,800	2,800	2,300/2,800	2,800	2,300/2,800	2,800
			Btuh	7,843/9,548	9,548	7,843/9,548	9,548	7,843/9,548	9,548	7,843/9,548	9,548
			Amps	11.3/12.4	10.8	11.3/12.4	10.8	11.3/12.4	10.8	11.3/12.4	10.8
		Large	Watts	-	-	-	-	3,800/4,700	4,700	3,800/4,700	4,700
			Btuh	-	-	-	-	12,958/16,027	16,027	12,958/16,027	16,027
			Amps	-	-	-	-	18.5/20.7	18.0	18.5/20.7	18.5
Cooling w/Heat Pump	Cooling	Capacity (Btuh)		7,100/7,400	7,300	8,900/8,900	8,900	11,000/11,400	11,400	14,000/14,500	14,400
		EER		11.6/11.5	10.7	10.6/10.4	10.4	10.0/9.9	10.1	9.3/9.3	9.2
		Full Load Amps		3.1/2.9	2.6	4.1/3.9	3.3	5.5/5.1	4.3	7.5/6.9	6.1
		Watts		612/642	680	841/856	859	1,105/1,157	1,124	1,513/1,558	1,572
	Reverse Cycle Heat (2)	Btuh		6,600/6,800	6,800	8,400/8,500	8,500	11,000/11,400	10,900	13,300/13,700	13,700
		COP		3.4/3.4	3.2	3.3/3.2	3.2	2.9/2.9	2.9	2.9/2.8	2.8
		Full Load Amps		2.8/2.6	2.4	3.6/3.5	2.9	5.4/5.0	4.2	6.8/6.3	5.5
		Watts		562/581	622	755/768	776	1,115/1,147	1,099	1,359/1,422	1,427
Minimum Small Circuit Ampacity		Heater		9.4/10.6	9.3	9.4/10.6	9.3	9.4/10.6	9.3	9.4/10.6	9.3
		Medium Heater		14.1/15.5	13.5	14.1/15.5	13.5	14.1/15.5	13.5	14.1/15.5	13.5
		Large Heater		-	-	-	-	23.1/25.9	22.5	23.1/25.9	22.5
Time Delay Fuses or Type HACR Circuit Breaker		Small Heater		15	15	15	15	15	15	15	15
		Medium Heater		15/20	15	15/20	15	15/20	15	15/20	15
		Large Heater		-	-	-	-	25/30	25	25/30	25
NEMA Receptacle Type Required		Small Heater		6-15R	7-20R	6-15R	7-20R	6-15R	7-20R	6-15R	7-20R
		Medium Heater		6-20R	7-20R	6-20R	7-20R	6-20R	7-20R	6-20R	7-20R
		Large Heater		-	-	-	-	6-30R	7-20R	6-30R	7-20R

(1) Based on ASHRAE and ARI test conditions of 95°F DB/75°F WB outdoor, 80°F DB/67°F WB inside.
(2) Based on ASHRAE and ARI test conditions of 47°F DB outdoor, 70°F DB indoor.
(3) Electric Heating Amps includes indoor fan motor. Heater size is determined by the power cord selection.
(4) The above data is subject to change.

Approximate Shipping Weights

Heating / Cooling Chassis and Front Panel
Size 007. . . . . .140 lbs.
Size 009 . . . . . .140 lbs.
Size 012 . . . . . .145 lbs.
Size 015 . . . . . .145 lbs.
Cabinet Wall Sleeve . . . . . .36 lbs.

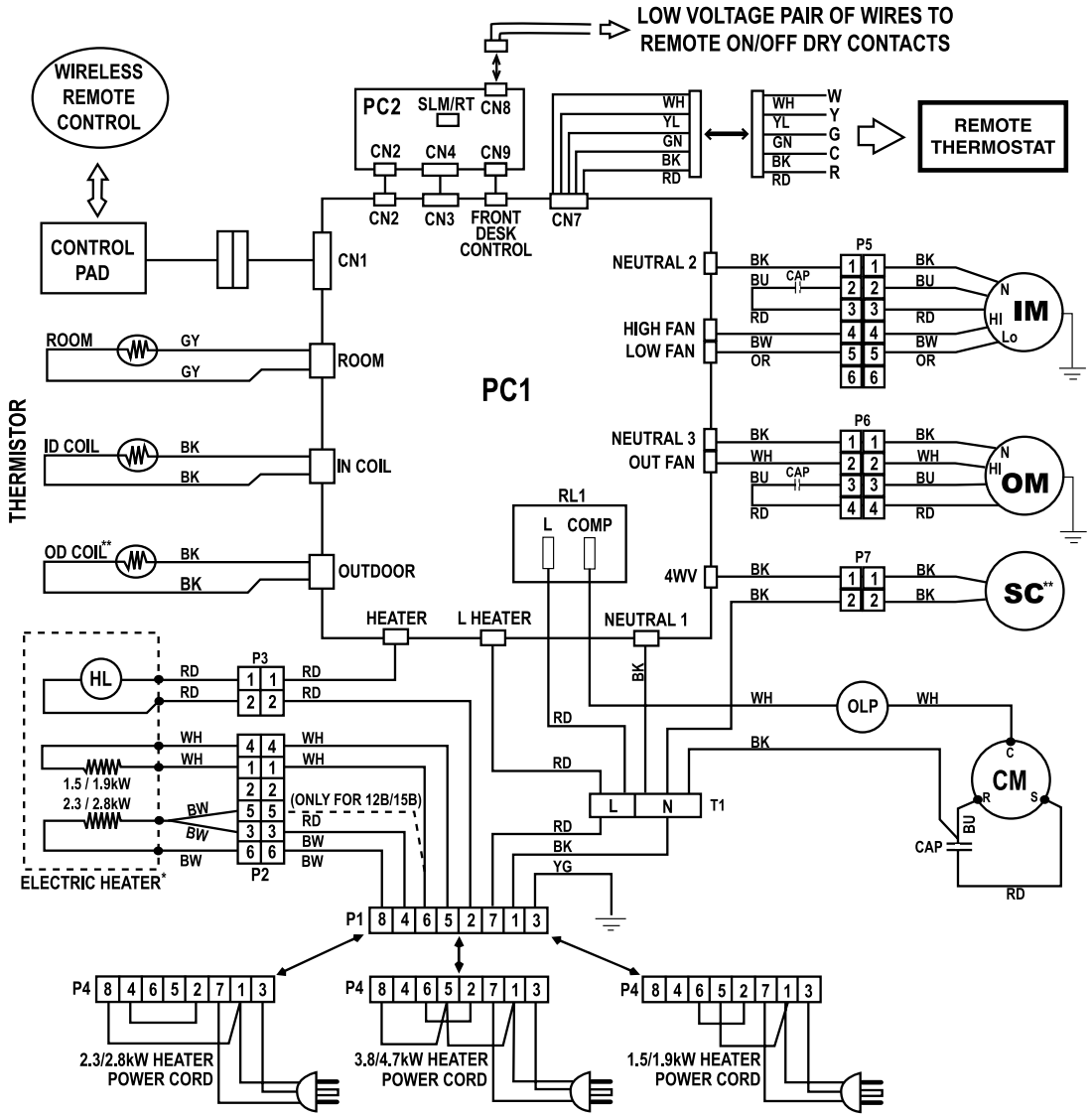
Louvers
Flush-stamped . . . . . .6 lbs.
Architectural . . . . . .8 lbs.

Subbase
3" (76 mm) High Electrical . . . . . .10 lbs.
4" (102 mm) High Electrical . . . . . .10 lbs.

Electrical Receptacle . . . . . .1 lb.
Plug Cord Cover . . . . . .1 lb.
Power Cord . . . . . .1 lb.

Wiring Diagrams

Model: PTAC 07B / 09B / 12B / 15B



NOTE:

* 2.3/2.8 kW TERMINAL ARE ALWAYS 0.25" WITH BLACK SHRINK SLEEVE.
1.5/1.9 kW TERMINAL WILL BE EITHER 0.188" WITH BLACK SLEEVE OR
0.25" WITH CLEAR, RED OR GREEN MARK ON SLEEVE.

** ONLY FOR HEAT PUMP (PTHP)

SYMBOL	NAME	SYMBOL	NAME
PC1	MAIN PC BOARD	SC	REVERSING VALVE SOLENOID COIL
PC2	DIP SWITCH PC BOARD	T#	TERMINAL BLOCK
CM	COMPRESSOR MOTOR	P#	CONNECTOR
OM	OUTDOOR MOTOR	OLP	OVERLOAD PROTECTOR
IM	INDOOR MOTOR		
⬚	COMPONENT PROVIDED AS ASSEMBLY	HL	HEATER HIGH LIMIT

SYMBOL	COLOR
BK	BLACK
BU	BLUE
BW	BROWN
GN	GREEN
GY	GREY
OR	ORANGE
RD	RED
WH	WHITE
YG	YELLOW/GREEN
YL	YELLOW

Wall Sleeve Installation

Figures 6 and 7 show installations for thin and panel wall construction. For all wall constructions, the center of gravity (10 1/4" from the outside edge of the wall sleeve) must be within the load bearing surface of the wall or other support must be employed. Support can be provided by floor mounting (with 208V/230V) units, a factory-supplied subbase or from other field-supplied materials. Louver frames (figure 8) are recommended for thin wall and panel wall applications for positive anchoring to the wall. For thicker walls, wall sleeve extensions are available from your local Remington® representative. Air splitters must be included in wall sleeve extensions.

* A wall sleeve should always extend 1/4" minimum past finished outside wall and have 1/4" of a bubble pitch to the outside.

Figure 6. Thin wall construction with standard electrical subbase

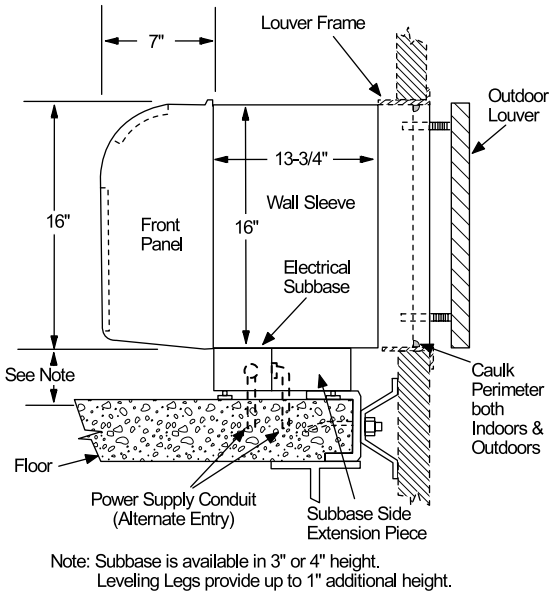


Figure 7. Thin wall construction without subbase (208/230V only)

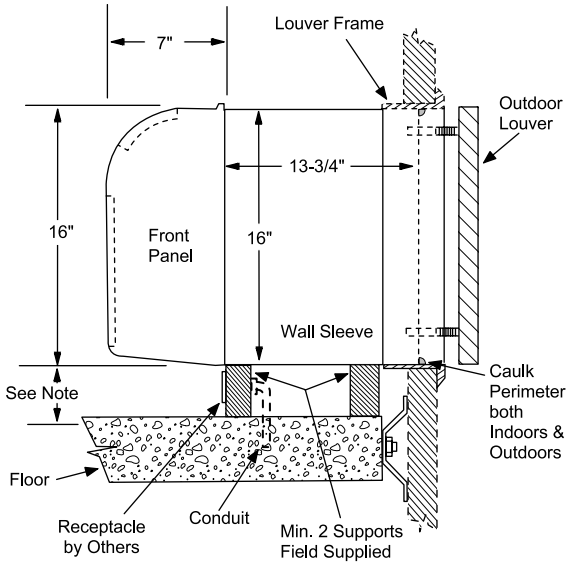


Figure 8. Louver frame

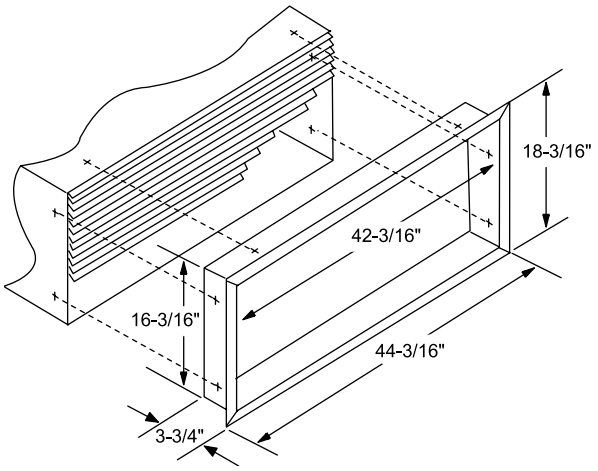


Table 1. Maximum wall thickness without sleeve extensions

Louver Type	Maximum Wall Thickness	
	No Subbase	Standard Subbase
Stamped 3/8"	14 1/8"	9 3/4"
Architectural 1 1/8"	14 7/8"	10 1/2"

Condensate Drain Kit

Heat pump models will generate condensate during the heating season. If left uncontrolled, the condensate can run out of the weep holes and down the side of the building, leaving stains. Therefore, the optional drain kit should be used whenever it's desirable to prevent stains. Internal condensate drain kits can be installed before placing the wall sleeve into the opening. External drain kits should be installed after the wall sleeve has been installed.

Installation of Optional Condensate Drain Kit

Figure 3 illustrates the installation of the indoor drain kit. The indoor drain kit must be installed before placing the wall sleeve into the opening. Install as follows:

1. Locate the drain so that it will be on the room side of the wall when the wall sleeve is installed.
2. Drill a 1/2" diameter hole in the base of the wall sleeve for the drain.
3. Drill two (2) 5/32" pilot holes for the mounting screws. These holes can be located using the drain kit as a pattern.
4. Assemble the drain kit as shown in Figure 9 and securely fasten it to the wall sleeve with the screws provided.
5. Install the wall sleeve as described on page 14.

Assembly of the external drain kit should be completed after the wall sleeve has been installed. Note: When using the external drain kit, the sleeve must be flush or beyond the outside finished wall (do not recess). Install the external drain kit as follows:

1. Assemble the drain kit as shown in Figure 10.
2. Choose the side of the wall sleeve to which the drain kit is to be installed.
3. There are weep holes and pilot holes provided in the wall sleeve from factory. Place the drain kit against the chosen weep hole and fasten securely with screws provided.
4. Cover the unused weep hole with the block off plate and gasket supplied with the drain kit.

Figure 9. Internal Drain Kit

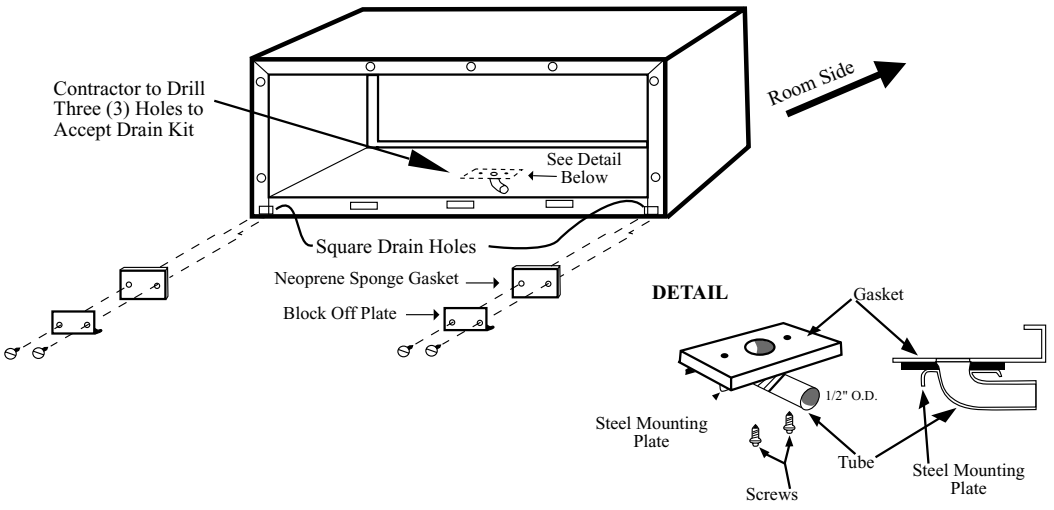
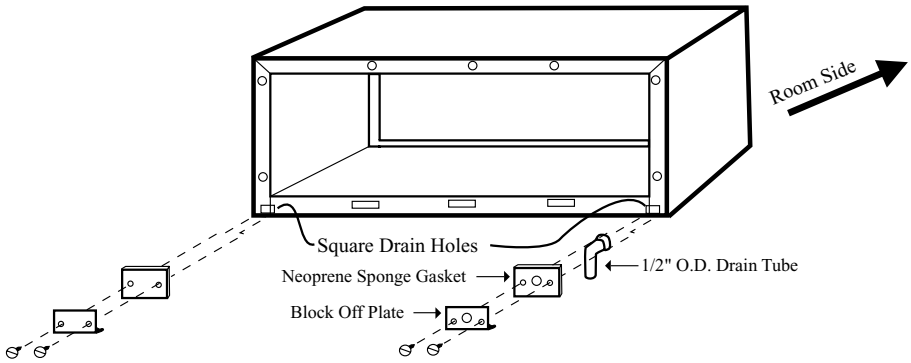
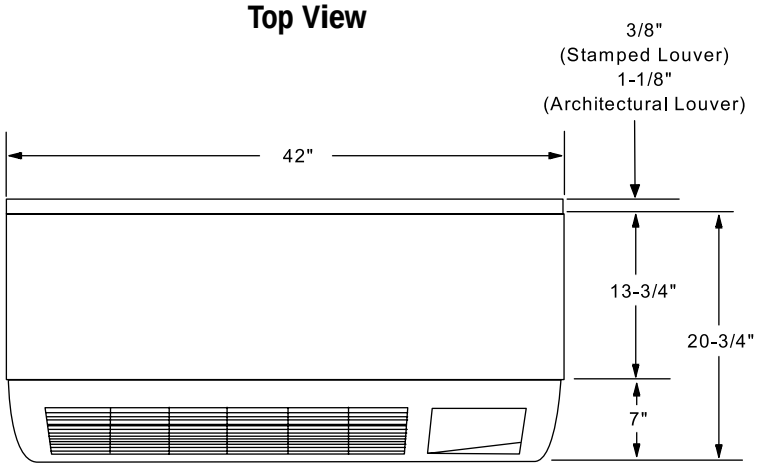


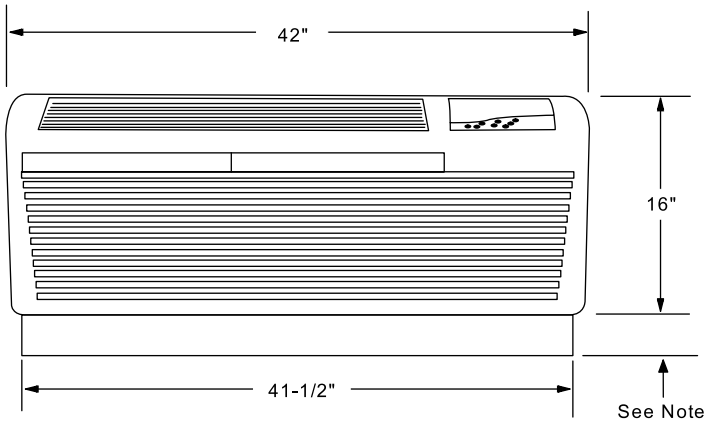
Figure 10. External Drain Kit



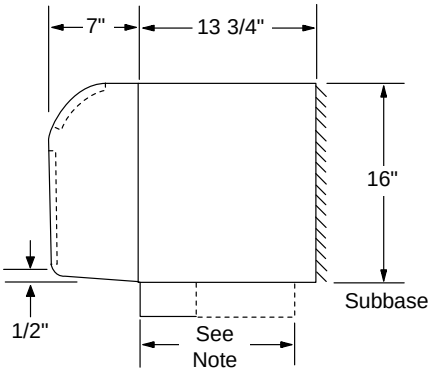
Unit Dimensions

Top View





Front View



Side View

Note: Subbase is available in 3" or 4" height with depth adjustable from 4 3/8" to 13 3/4". Unit pictured with subbase installed, but can also be floor mounted without subbase for 208V/230V applications.

STANDARD LOUVER COLORS

Baked Enamel Finish

LB
Lite Bronze

MB
Medium Bronze

DB
Dark Bronze

EW
Off White

GW
Gloss White

WS
White Stone

BR1
Brick Red 1

BR3
Brick Red 3

BR5
Brick 5

SLG
Slate Gray

MBL
Medium Blue

MGN
Medium Green

SPECIAL COLOR: We can match your color. A color chip or sample should be sent to our Customer Service Department. A sample chip will be returned to you for your approval. Please contact our Sales Department if you have any questions.
***Colors are representative only. Actual color may vary slightly.**